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EXAMINER

FOX, CHARLES A

ART UNIT

PAPER NUMBER

3652

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,619

Applicant(s)

GRIFFIN, AMY R.

Examiner

Charles A. Fox

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-13,17-28,31-35 and 39-46 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

- 5) ☐ Claim(s) _____ is/are allowed.

- 6) ☒ Claim(s) 1-4,6-13,17-28,31-35 and 39-46 is/are rejected.

- 7) ☐ Claim(s) _____ is/are objected to.

- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 03 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,8-10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Beach. In regards to claim 1 Beach US 2,931,519 discloses an apparatus for positioning an object comprising:

a first section (10) having a lifting mechanism (12) capable of movement in a vertical direction;

a second section (11) disposed over said lifting mechanism (12) and capable of moving with said lifting mechanism, said second section having a first sliding mechanism, said first sliding mechanism comprising a block (111) and a lead screw (110) for moving said block; and

a third section (13) disposed over said sliding mechanism and attached to said block, capable of moving in response to said lifting and sliding mechanisms, wherein said third section has a surface (a) for supporting an object.

In regards to claims 8 and 9 Beach further discloses that the lifting section comprises hydraulic cylinders (75) and a source of pressurized hydraulic fluid (96).

In regards to claims 10 and 11 Beach further disclose the apparatus as having wheels (18) that allow the apparatus to move in a horizontal direction that is perpendicular to said first horizontal travel direction of said third section, and that

wheels further comprise a clearance between said first section and an underlying surface, whereby said apparatus can clear obstacles when moving in any horizontal direction.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 and 7,13,17-23,26-28 and 31,35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beach as applied to claim 1 above, and further in view of Mills et al. In regards to claims 2-4,7, 26-28 and 31 Beach teaches the limitations of claim 1 as above, he does not teach using a jack screw or a pneumatic device as a lifting means. Mills et al. US 4,461,455 teaches a device for lifting aircraft engines wherein a first lift assembly is a series of jack screws (64) and a second lift assembly is a series of pneumatic lifts (54,120) wherein the two lift assemblies work in tandem to raise the load to its proper position, Mills also teaches providing a pressurized gas source for pneumatic lifting assemblies (54,120).

It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the lift assemblies taught by Mills et al. in the device taught by Beach in order to allow the apparatus to align the object being lifted with its intended receiver in a manner that minimizes the chance of damage to the object while it is being mounted.

In regards to claims 13,17 and 19 Beach teaches an apparatus for positioning an object comprising:

a base section (10) having a lifting mechanism (12) capable of movement in a vertical direction;

a first section (11) disposed over said lifting mechanism (12) and capable of moving with said lifting mechanism, said second section having a first sliding mechanism, said first sliding mechanism comprising a block (111) and a lead screw (110) for moving said block; and

a second section (13) disposed over said sliding mechanism and attached to said block ,capable of moving in response to said lifting and sliding mechanisms, wherein said second section has a surface (a) for supporting an object. Beach does not teach the lifting mechanism being a combination of a jack screw and pneumatic lift devices. Mills et al. US 4,461,455 teaches a device for lifting aircraft engines wherein a first lift assembly is a series of jack screws (64) and a second lift assembly is a series of pneumatic lifts (54,120) wherein the two lift assemblies work in tandem to raise the load to its proper position, Mills also teaches providing a pressurized gas source for pneumatic lifting assemblies (54,120).

It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the lift assemblies taught by Mills et al. in the device taught by Beach in order to allow the apparatus to align the object being lifted with its intended receiver in a manner that minimizes the chance of damage to the object while it is being mounted.

In regards to claims 20 and 21, 32 and 33 Beach further teaches that the lifting section comprises hydraulic cylinders (75) and a source of pressurized hydraulic fluid (96).

In regards to claims 22 and 23 Beach further disclose the apparatus as having wheels (18) that allow the apparatus to move in a horizontal direction that is perpendicular to said first horizontal travel direction of said third section, and that wheels further comprise a clearance between said first section and an underlying surface, whereby said apparatus can clear obstacles when moving in any horizontal direction.

In regards to claim 34 Beach teaches an apparatus for lifting an object comprising:

- a support frame having wheels (18) for rolling said apparatus in a first direction;

- a lifting and lowering mechanism (12) disposed over said frame;

- a first plate connected to said lifting and lowering mechanism;

- a sliding mechanism disposed over said plate;

- said sliding mechanism comprising a block having a transmission system for moving said block in a second horizontal direction perpendicular to said first horizontal direction;

- a second plate disposed over said sliding mechanism and attached to said block, such that said lifting mechanism, said sliding mechanism and said wheels impart motion to said second plate, and said second plate has a surface for supporting an object. Beach does not teach using a jack screw or a pneumatic device as a lifting means.

Mills et al. teaches a device for lifting aircraft engines wherein a first lift assembly is a series of jack screws (64) and a second lift assembly is a series of pneumatic lifts (54,120) wherein the two lift assemblies work in tandem to raise the load to its proper position, Mills also teaches providing a pressurized gas source for pneumatic lifting assemblies (54,120).

It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the lift assemblies taught by Mills et al. in the device taught by Beach in order to allow the apparatus to align the object being lifted with its intended receiver in a manner that minimizes the chance of damage to the object while it is being mounted.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach. Beach teaches a carriage (103) with wheels (104) that roll along tracks (105) for allowing the first horizontal movement of said device. While Beach does not teach using slider blocks in slide rails it would have been obvious to one of ordinary skill in the art, at the time of invention that the wheels and rails taught by Beach perform the equivalent function and would result in the same expected results, therefore the claim is an obvious variant of the Beach device.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach as applied to claims 1 above, and further in view of Udea et al. Beach teaches the limitations of claim 1 as above, he does not teach a second slide mechanism for moving said object in a second horizontal direction.

Ueda et al. US 5,023,534 teach a device for moving an object with a load platform that is movable in two perpendicular horizontal directions. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the directional capabilities taught by Ueda et al. to the apparatus taught by Beach in order to allow the load platform to be positioned in a precise manner.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach in view of Mills et al. Beach further teaches a carriage (103) with wheels (104) that roll along tracks (105) for allowing the first horizontal movement of said device. While Beach does not teach using slider blocks in slide rails it would have been obvious to one of ordinary skill in the art, at the time of invention that the wheels and rails taught by Beach perform the equivalent function and would result in the same expected results, therefore the claim is an obvious variant of the Beach device.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach in view of Mills et al. as applied to claims 13 above, and further in view of Ueda et al. Beach in view of Mills et al. teach the limitations of claim 13 as above, he does not teach a second slide mechanism for moving said object in a second horizontal direction.

Ueda et al. US 5,023,534 teach a device for moving an object with a load platform that is movable in two perpendicular horizontal directions. It would have been obvious to one of ordinary skill in the art, at the time of invention to provide the directional capabilities taught by Ueda et al. to the apparatus taught by Beach in order to allow the load platform to be positioned in a precise manner.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach.

Beach teaches an apparatus for positioning an object comprising:

a first section (10) having a lifting mechanism (12) capable of movement in a vertical direction;

a second section (11) disposed over said lifting mechanism (12) and capable of moving with said lifting mechanism, said second section having a first sliding mechanism, said first sliding mechanism comprising a block (111) and a lead screw (110) for moving said block; and

a third section (13) disposed over said sliding mechanism and attached to said block, capable of moving in response to said lifting and sliding mechanisms, wherein said third section has a surface (a) for supporting an object;

a carriage (103) with wheels (104) that roll along tracks (105) for allowing the first horizontal movement of said device. While Beach does not teach using slider blocks in slide rails it would have been obvious to one of ordinary skill in the art, at the time of invention that the wheels and rails taught by Beach perform the equivalent function and would result in the same expected results, therefore the claim is an obvious variant of the Beach device.

Claims 35,39,40 and 41,45 are rejected under 35 U.S.C. 103(a) by Beach in view of Nemoto. In regards to claims 35,41 and 42 Beach US 2,931,519 discloses the method of positioning an object, comprising the steps of:

providing a table having a base section (14), a middle section and a support section (60) adapted to move vertically and horizontally;

placing an object (L) on said support section;

moving said table to a desired destination for said object;
operating a provided lift mechanism to move said support section vertically;
operating a provided slide mechanism to move said support section horizontally;
said object being positioned in a desired location by said moving and operational steps.

Beach does not teach the lift mechanism as being manually operated. Nemoto US 6,271,657 teaches an apparatus for positioning test heads where the step of actuating a lift mechanism comprises manually rotating an input shaft attached to the jacking mechanisms. It would have been obvious to one of ordinary skill in the art, at the time of invention to modify the methods of moving an object taught by Beach with the manual input steps taught by Nemoto in order to allow the apparatus to operate independently of any power source, thereby allowing the apparatus to work where no immediate power source is available.

In regards to claims 39 and 45 beach further discloses the steps of operating the slide mechanism comprises manually rotating a shaft attached to a lead screw.

In regards to claims 40 and 46 Beach further discloses the step of moving the table comprises rolling said table utilizing wheels (18).

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach in view of Nemoto as applied to claim 41 above, and further in view of Shiiba et al. Beach in view of Nemoto teach the limitations of claim 41 as above, they do not teach the lift mechanism as being pneumatically actuated. Shiiba et al. US \$,643,630 teaches a lift device whose operation comprises the step of supplying a pressurized gas to a gas

cylinder assembly. It would have been obvious to one of ordinary skill in the art, at the time of invention to modify the step of operating the lift mechanism taught by Beach in view of Nemoto by providing gas to the actuation system as taught by Shiiba et al. in order to make use of a readily available source of power that requires no special knowledge to tap into and use.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach in view of Nemoto as applied to claim 41 above, and further in view of Mills et al. Beach in view of Nemoto teach the limitations of claim 41 as above, they does not teach the step of supplying a pressurized gas to cylinder assemblies. Mills et al. teaches the step of supplying a pressurized gas to cylinders to position a load. It would have been obvious to modify the methods taught by Beach in view of Nemoto by adding the step of supplying pressurized gas as taught by Mills et al. in order to orient the object being moved in a more controlled manner.

Response to Amendment

The amendments filed on January 3, 2003 have been entered into the record.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles A. Fox whose telephone number is 703-605-4294. The examiner can normally be reached between 7:00-5:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached at 703-308-3248. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.



EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

CAF
March 10, 2003

CAF 3-10-03